

RESULT 15
 PCT-US01-22395A-219
 ; Sequence 219, Application PC/TUS0122395A
 ; GENERAL INFORMATION:
 ; APPLICANT: Bullard, James M.
 ; APPLICANT: Janjic, Nebojsa
 ; APPLICANT: McHenry, Charles S.
 ; APPLICANT: Replidyne, Inc.
 ; TITLE OF INVENTION: NOVEL DNA POLYMERASE III HOLOENZYME DELTA SUBUNIT
 ; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND PROTEINS
 ; FILE REFERENCE: RDN03PCT
 ; CURRENT APPLICATION NUMBER: PCT/US01/22395A
 ; CURRENT FILING DATE: 2001-07-16
 ; PRIOR APPLICATION NUMBER: 60/218,246
 ; PRIOR FILING DATE: 2000-07-14
 ; NUMBER OF SEQ ID NOS: 230
 ; SOFTWARE: PatentIn Ver. 2.0
 ; SEQ ID NO 219
 ; LENGTH: 312
 ; TYPE: PRT
 ; ORGANISM: *Thermotoga maritima*
 PCT-US01-22395A-219

Query Match 99.3%; Score 1562.5; DB 1; Length 312;
 Best Local Similarity 99.7%; Pred. No. 4.8e-124;
 Matches 311; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy	1	MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPKASDVL	60
Db	1	MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPKASDVL	60
Qy	61	EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFKALEEPPEYA	120
Db	61	EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFKALEEPPEYA	120
Qy	121	VIVLNRWRWHYLLPTIKSRVFRVNVVPKEFRDLVKEIGDLWEELPLLERDFKTALEYA	180
Db	121	VIVLNRWRWHYLLPTIKSRVFRVNVVPKEFRDLVKEIGDLWEELPLLERDFKTALEYA	180
Qy	181	KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT	240
Db	181	KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT	240
Qy	241	NTITGKDAFLLIQRLTRIILHENTWESVED-KSVSFLDSILRVKIANLNNKLTLMNILAI	299
Db	241	NTITGKDAFLLIQRLTRIILHENTWESVEDQKSVSFLDSILRVKIANLNNKLTLMNILAI	300
Qy	300	HRERKRGVNAWS	311
Db	301	HRERKRGVNAWS	312

RESULT 15
 US-09-906-179A-219
 ; Sequence 219, Application US/09906179A
 ; Publication No. US20030219737A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Bullard, James M.

```
; APPLICANT: Janjic, Nebojsa
; APPLICANT: McHenry, Charles S.
; TITLE OF INVENTION: NOVEL DNA POLYMERASE III HOLOENZYME DELTA SUBUNIT
; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND PROTEINS
; FILE REFERENCE: RDYN03
; CURRENT APPLICATION NUMBER: US/09/906,179A
; CURRENT FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/218,246
; PRIOR FILING DATE: 2000-07-14
; PRIOR APPLICATION NUMBER: 09/818,780
; PRIOR FILING DATE: 2001-03-28
; PRIOR APPLICATION NUMBER: 60/192,736
; PRIOR FILING DATE: 2000-03-28
; NUMBER OF SEQ ID NOS: 230
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 219
; LENGTH: 312
; TYPE: PR1
; ORGANISM: Thermotoga maritima
US-09-906-179A-219
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Query Match          99.3%; Score 1562.5; DB 3; Length 312;
Best Local Similarity 99.7%; Pred. No. 5.2e-122;
Matches 311; Conservative 0; Mismatches 0; Indels 1; Gaps 1;
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Qy      1 MNDLIRKYAKDQLETILKRIIEKSEGISILINGEDLSYPREVSLLEPEYVEKFPFKASDVL 60
          |||
Db      1 MNDLIRKYAKDQLETILKRIIEKSEGISILINGEDLSYPREVSLLEPEYVEKFPFKASDVL 60

Qy     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFKALEEPPEYA 120
          |||
Db     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFKALEEPPEYA 120

Qy    121 VIVLNRWRWHYLLPTIKSRVFRVVVNPKEFRDLVKEIGDLWEELPLLERDFKTALEY 180
          |||
Db    121 VIVLNRWRWHYLLPTIKSRVFRVVVNPKEFRDLVKEIGDLWEELPLLERDFKTALEY 180

Qy    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240
          |||
Db    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240

Qy    241 NTITGKDAFLLIQRLTRILHENTWESVED-KSVSFLDSLVRVKIANLNNKLTLMNLA 299
          |||
Db    241 NTITGKDAFLLIQRLTRILHENTWESVEDQKSVSFLDSLVRVKIANLNNKLTLMNLA 300

Qy    300 HRERKRGVNAWS 311
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Db    301 HRERKRGVNAWS 312
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RESULT 1
A72337
DNA polymerase III, gamma subunit-related protein - Thermotoga maritima (strain MSB8)
C;Species: Thermotoga maritima
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
C;Accession: A72337
R;Nelson, K.E.; Clayton, R.A.; Gill, S.R.; Gwinn, M.L.; Dodson, R.J.; Haft, D.H.; Hickey,
E.K.; Peterson, J.D.; Nelson, W.C.; Ketchum, K.A.; McDonald, L.; Utterback, T.R.; Malek,
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J.A.; Linher, K.D.; Garrett, M.M.; Stewart, A.M.; Cotton, M.D.; Pratt, M.S.; Phillips, C.A.; Richardson, D.; Heidelberg, J.; Sutton, G.G.; Fleischmann, R.D.; White, O.; Salzberg, S.L.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
 Nature 399, 323-329, 1999
 A;Title: Evidence for lateral gene transfer between Archaea and Bacteria from genome sequence of *Thermotoga maritima*.
 A;Reference number: A72200; MUID:99287316; PMID:10360571
 A;Accession: A72337
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-312
 A;Cross-references: UNIPROT:Q9WZM9; UNIPARC:UPI00000D3995; GB:AE001746; GB:AE000512; NID:g4981285; PIDN:AAD35853.1; PID:g4981299; TIGR:TM0771
 A;Experimental source: strain MSB8
 C;Genetics:
 A;Gene: TM0771

Query Match 99.3%; Score 1562.5; DB 2; Length 312;
 Best Local Similarity 99.7%; Pred. No. 3.8e-90;
 Matches 311; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy	1	MNDLIRKYAKDQLETIKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPKASDVL	60
Db	1	MNDLIRKYAKDQLETIKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPKASDVL	60
Qy	61	EIDPEGENIGIDDIRTIKDFLNSPELYTRKYVIVHDCERMTQQAANAFKALEEPEYA	120
Db	61	EIDPEGENIGIDDIRTIKDFLNSPELYTRKYVIVHDCERMTQQAANAFKALEEPEYA	120
Qy	121	VIVLNTRRWHYLLPTIKSRVFRVVNVVPKEFRDLVKEIGDLWEELPLLERDFKTALEY	180
Db	121	VIVLNTRRWHYLLPTIKSRVFRVVNVVPKEFRDLVKEIGDLWEELPLLERDFKTALEY	180
Qy	181	KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT	240
Db	181	KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT	240
Qy	241	NTITGKDAFLLIQRLTRIILHENTWESVED-KSVSFLDSILRVKIANLNNKLTLMNILAI	299
Db	241	NTITGKDAFLLIQRLTRIILHENTWESVEDQKSVSFLDSILRVKIANLNNKLTLMNILAI	300
Qy	300	HRERKRGVNAWS 311	
Db	301	HRERKRGVNAWS 312	

RESULT 15

US-09-906-179A-220
 ; Sequence 220, Application US/09906179A
 ; Publication No. US20030219737A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Bullard, James M.
 ; APPLICANT: Janjic, Nebojsa
 ; APPLICANT: McHenry, Charles S.
 ; TITLE OF INVENTION: NOVEL DNA POLYMERASE III HOLOENZYME DELTA SUBUNIT
 ; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND PROTEINS
 ; FILE REFERENCE: RDYN03

; CURRENT APPLICATION NUMBER: US/09/906,179A
 ; CURRENT FILING DATE: 2001-07-16
 ; PRIOR APPLICATION NUMBER: 60/218,246
 ; PRIOR FILING DATE: 2000-07-14
 ; PRIOR APPLICATION NUMBER: 09/818,780
 ; PRIOR FILING DATE: 2001-03-28
 ; PRIOR APPLICATION NUMBER: 60/192,736
 ; PRIOR FILING DATE: 2000-03-28
 ; NUMBER OF SEQ ID NOS: 230
 ; SOFTWARE: PatentIn Ver. 2.0
 ; SEQ ID NO 220
 ; LENGTH: 1980
 ; TYPE: DNA
 ; ORGANISM: *Thermotoga maritima*
 US-09-906-179A-220

Query Match 100.0%; Score 936; DB 3; Length 1980;
 Best Local Similarity 100.0%; Pred. No. 6.4e-283;
 Matches 936; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	ATGAACGATTTGATCAGAAAGTACGCTAAAGATCAACTGGAAACTTTGAAAAGGATCATA	60
Db	288	ATGAACGATTTGATCAGAAAGTACGCTAAAGATCAACTGGAAACTTTGAAAAGGATCATA	347
Qy	61	AAAAAGTCTGAAGGAATATCCATCCTCATAAATGGAGAAGATCTCTCGTATCCGAGAGAA	120
Db	348	AAAAAGTCTGAAGGAATATCCATCCTCATAAATGGAGAAGATCTCTCGTATCCGAGAGAA	407
Qy	121	GTATCCCTTGAACCTCCCGAGTACGTGGAGAAATTTCCCCGGAAGGCTCGGATGTTCTG	180
Db	408	GTATCCCTTGAACCTCCCGAGTACGTGGAGAAATTTCCCCGGAAGGCTCGGATGTTCTG	467
Qy	181	GAGATAGATCCCGAGGGGAGAACATAGGCATAGACGACATCAGAACGATAAAGGACTTC	240
Db	468	GAGATAGATCCCGAGGGGAGAACATAGGCATAGACGACATCAGAACGATAAAGGACTTC	527
Qy	241	CTGAACACAGCCCCGAGCTCTACACGAGAAAGTACGTGATAGTCCACGACTGTGAAAGA	300
Db	528	CTGAACACAGCCCCGAGCTCTACACGAGAAAGTACGTGATAGTCCACGACTGTGAAAGA	587
Qy	301	ATGACCCAGCAGGCGGCGAACGCGTTTCTGAAGGCCCTTGAAGAACCACCAAGATACGCT	360
Db	588	ATGACCCAGCAGGCGGCGAACGCGTTTCTGAAGGCCCTTGAAGAACCACCAAGATACGCT	647
Qy	361	GTGATCGTTCTGAACACTCGCCGCTGGCATTATCTACTGCCGACGATAAAGAGCCGAGTG	420
Db	648	GTGATCGTTCTGAACACTCGCCGCTGGCATTATCTACTGCCGACGATAAAGAGCCGAGTG	707
Qy	421	TTCAGAGTGGTTGTGAACGTTCCAAAGGAGTTTCAGAGATCTCGTGAAAGAGAAAATAGGA	480
Db	708	TTCAGAGTGGTTGTGAACGTTCCAAAGGAGTTTCAGAGATCTCGTGAAAGAGAAAATAGGA	767
Qy	481	GATCTCTGGGAGGAACCTTCCACTTCTTGAGAGAGACTTCAAACGGCTCTCGAAGCCTAC	540
Db	768	GATCTCTGGGAGGAACCTTCCACTTCTTGAGAGAGACTTCAAACGGCTCTCGAAGCCTAC	827
Qy	541	AAACTTGGTGCAGAAAACCTTCTGGATTGATGGAAGTCTCAAAGTTTGGAGACGGAA	600

Db	828	AAACTTGGTGC	CGAAAAA	CTTCTGGATTGATGGAAAGTCTCAAAGTTTGGAGACGGAA	887
Qy	601	AAACTCTTGAAAAAGGTCCTTTCAAAGGCCTCGAAGGTTATCTCGCATGTAGGGAGCTC	660		
Db	888	AAACTCTTGAAAAAGGTCCTTTCAAAGGCCTCGAAGGTTATCTCGCATGTAGGGAGCTC	947		
Qy	661	CTGGAGAGATTTTCAAAGTGGAATCGAAGGAATCTTTGCGCTTTTGTATCAGGTGACT	720		
Db	948	CTGGAGAGATTTTCAAAGTGGAATCGAAGGAATCTTTGCGCTTTTGTATCAGGTGACT	1007		
Qy	721	AACACGATAACAGGAAAAGACGCGTTTCTTTTGATCCAGAGACTGACAAGAATCATTCTC	780		
Db	1008	AACACGATAACAGGAAAAGACGCGTTTCTTTTGATCCAGAGACTGACAAGAATCATTCTC	1067		
Qy	781	CACGAAAACACATGGGAAAGCGTTGAAGATCAAAAAAGCGTGCTTTCTCGATTCAATT	840		
Db	1068	CACGAAAACACATGGGAAAGCGTTGAAGATCAAAAAAGCGTGCTTTCTCGATTCAATT	1127		
Qy	841	CTCAGGGTGAAGATAGCGAATCTGAACAACAACTCACTCTGATGAACATCCTCGCGATA	900		
Db	1128	CTCAGGGTGAAGATAGCGAATCTGAACAACAACTCACTCTGATGAACATCCTCGCGATA	1187		
Qy	901	CACAGAGAGAGAAAAGAGAGGTGTCAACGCTTGGAGC	936		
Db	1188	CACAGAGAGAGAAAAGAGAGGTGTCAACGCTTGGAGC	1223		